

# GREAT SCOTT

The Stereo Compacts that turn you on!



H. H. Scott, Inc., 111 Powdermill Road, Maynard, Mass.



## SCOTT STEREO COMPACTS

You can play your favorite records on any phonograph and call it stereo high fidelity, but Scott believes that your ears (and your records) deserve better treatment. Scott makes professional stereo equipment . . . the kind used by radio stations and audio experts. And now, Scott has packaged these same advanced electronics into handsome compact stereo systems . . . just as easy to use as an ordinary phonograph, but you'll *hear* the difference immediately. In fact, you'll hear a lot of things you've never heard before. Like AM broadcasts with a clarity you never dreamed possible. Like FM stereo so real you can almost touch it. Lots more. Like being able to plug in an electric guitar and microphone. Scott is accustomed to providing these features for professionals in the audio field . . . and certainly you deserve no less.

There are three Scott compacts from which to choose, ranging from the deluxe 2503 to the economy 2501, each offering its own distinctive combination of features. The feature that remains constant, however, is quality. Every Scott compact is designed, assembled, and tested by the same people responsible for Scott's most expensive professional components. Every transistor, every diode, every last wire that goes into Scott's lowest-priced compact comes from the same carefully selected supply chosen for Scott's highest-priced receiver.



### SCOTT . . . The compact with component features

**1.** Complete component controls let you adjust the music to your own tastes and room acoustics. **2.** Microphone/Guitar mixer controls let you make your own music on one or both channels. **3.** Crystal-clear AM, 3-dimensional FM stereo are yours with Scott's revolutionary compact tuner. **4.** Professional 3-speed automatic turntable. **5.** Highly sensitive Pickering magnetic cartridge with diamond stylus. **6.** Tuning meter helps you tune for best reception. (model 2502, 2503) **7.** Complete provision for plugging in tape recorder or tape cartridge machine. **8.** Extra speaker provision for music in other rooms. **9.** Stereo headphone output for private listening with speakers turned off. **10.** Changeable grille cloths (model 2503 speakers) to match room decor. **11.** Self-adhesive panel strips, in HOUSE & GARDEN colors, color-match your compact to interior decor. **12.** Stylus cleaning brush keeps records dust-free. **13.** Stereo light indicator goes on only when tuner has automatically switched to stereo. (model 2502, 2503)



# 2501

This compact phono system gives you Scott component features plus built-in Scott performance and quality . . . at very modest cost. Dual bass, treble, and volume controls let you adjust each channel separately to suit your tastes and room acoustics. Scott's microphone/guitar input and connection provisions for tape recorder, extra speakers, separate tuner, and stereo headphones give you a range of musical enjoyment that you just won't find in any other compact at this price.



**GUITAR/MICROPHONE INPUT . . .** Plug in an electric guitar or a microphone, or, better still, an electric guitar and a microphone! For those who make their own music, a Scott compact is the most economical way to enjoy today's new instrumental sound. **TAPE RECORDER OUTPUT . . .** It's a cinch to connect your tape recorder to Scott's new compact, and you can build up your tape library with material from AM or FM broadcasts or records. **STEREO HEADPHONE OUTPUT . . .** Great stereo sound . . . for your ears only! . . . just plug in a set of stereo headphones and push the speaker selector switch to OFF. **EXTRA SPEAKER PROVISION . . .** Want music in other rooms of the house? . . . connect extra Scott speakers. There's a wide selection of Scott speakers at your dealer's . . . from bookshelf size on up.



# SCOTT®

H. H. Scott, Inc., 111 Powdermill Road, Maynard, Mass.  
Export: Scott International, Maynard, Mass.





**2502** Here's a complete home music system at an agreeably moderate cost. The 2502 features an ultra-sensitive AM/FM/FM stereo tuner with Scott's revolutionary new Field Effect transistor circuitry,\* a space-age development which lets you hear more stations more clearly. Fully automatic stereo switching lets you relax and enjoy the music, while direct coupled all-silicon transistor amplifier circuitry gives you the cleanest sound this side of the actual performance.

\*patents pending

**2503** This is Scott's top compact. The 2503 boasts all the features of the other two Scott compacts, with the important plus of greater tuner sensitivity and more power. In addition, the 2503's precision magnetic cartridge incorporates a stylus cleaning brush to keep your records clean and new. Big Scott S-10 extended range speakers are standard equipment, giving you the deep and vibrant sound associated with more costly equipment. Optional smoky-gray plastic cover protects your compact while in use.

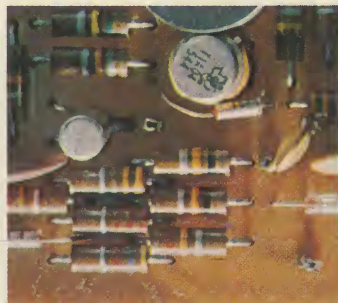




# Advanced electronics...the secret of Scott sound



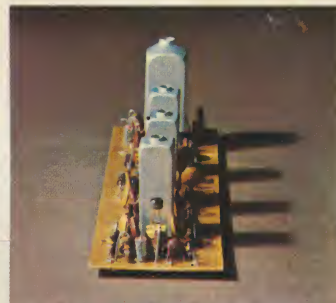
This tiny Field Effect transistor is one of the reasons you'll hear more stations more clearly with your Scott compact stereo. This exclusive Scott development keeps strong local stations from interfering with weak distant ones.



Here's one Scott feature you *won't* hear! Scott's direct coupled all-silicon output circuitry sends plenty of power to the speakers, without adding any distortion of its own. This is the most distortion-free output system known.



You'll never have to get out of your chair to switch to stereo, because this Scott-patented device instantly and automatically does it for you. In addition, a special light goes on to tell you when stereo is being broadcast.



Here's the circuitry that gives Scott stereo its amazing 3-dimensional feeling. Only silicon planar transistors, such as Scott uses, provide the high selectivity and wide bandwidth for maximum stereo separation.

## SCOTT COMPACT STEREO FEATURES AND SPECIFICATIONS

MODEL	2501	2502	2503
Dual loudness control	yes	yes	yes
Dual bass control	yes	yes	yes
Dual treble control	yes	yes	yes
Tape Monitor	yes	yes	yes
Mono-stereo selector	yes	yes	yes
Speaker Main-Remote-Off switch	yes	yes	yes
Speaker balancing control	yes	yes	yes
Power On-Auto-Off switch	yes	yes	yes
Headphone jack	yes	yes	yes
Outputs: Main left & right speakers, Remote left & right speakers, Stereo phones, left & right tape recorder.	yes	yes	yes
Professional automatic turntable, magnetic cartridge	yes	yes	yes
Automatic stereo switching with stereo light	no	yes	yes
Precision signal-strength meter	no	yes	yes
Selector: Microphone/guitar (for mixing), phono, AM, FM, extra	Selector: Microphone-guitar (for mixing), phono, tuner, extra	yes	yes
Plastic dust cover	optional	optional	optional
Scott S-10 extended range speakers	Scott S-9 wide-range speakers	Scott S-9 wide-range speakers	yes
Frequency response	18-25,000 Hz	18-25,000 Hz	18-25,000 Hz
Music power @ 4 ohms	36 watts	36 watts	40 watts
Tuner usable sensitivity	N/A	2.3 $\mu$ v	2.1 $\mu$ v

© H. H. Scott, Inc. \*FET tuner circuits, patents pending We reserve the right to make changes and improvements without notice.

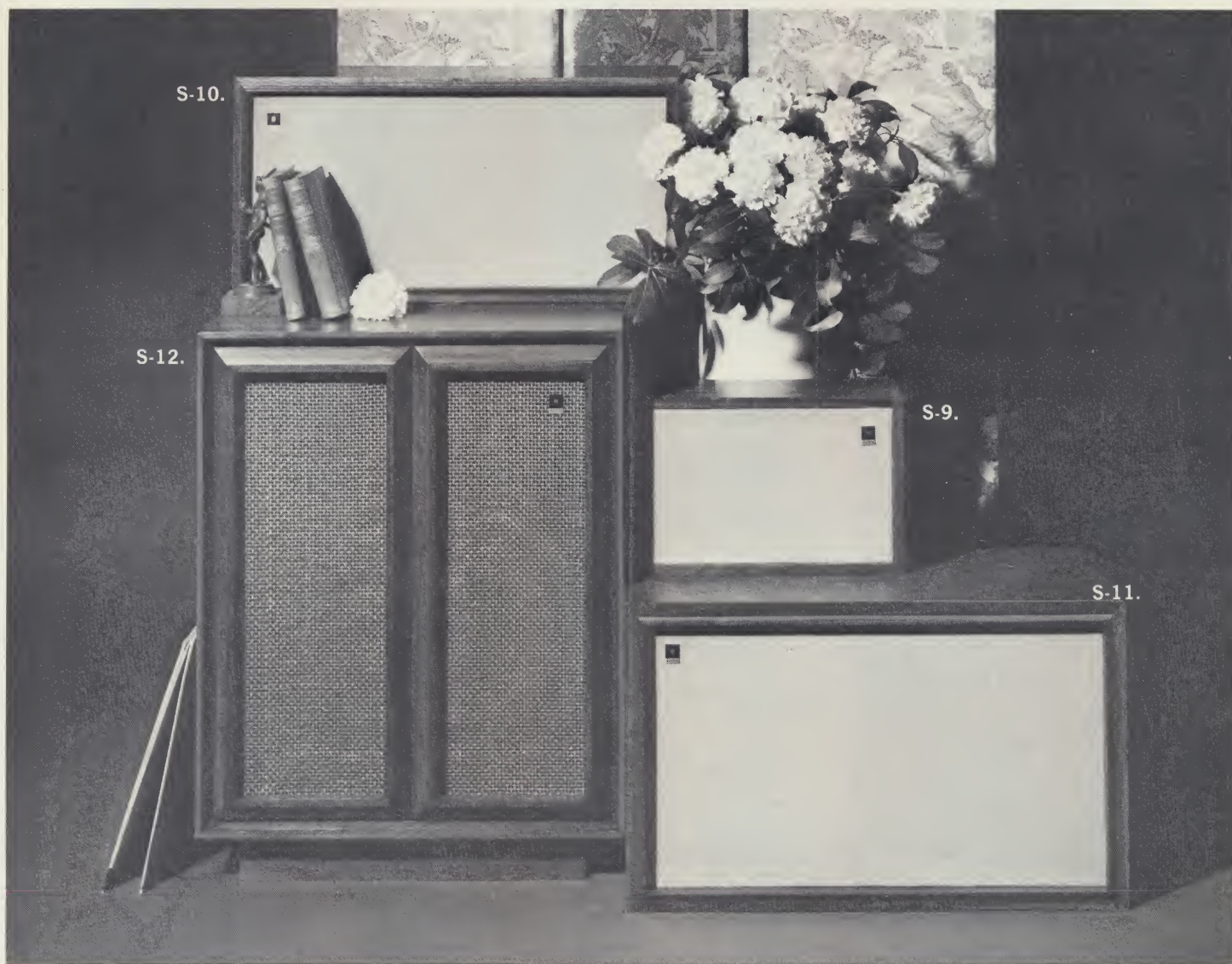
Printed in U.S.A.





# SCOTT SPEAKERS

The secret of superior sound is the careful selection of components perfectly matched in quality, performance, and reliability. Only Scott Controlled Impedance speakers have been specifically designed to fulfill the stringent requirements of today's electronically advanced solid-state amplifiers and receivers:



**S-9.** Ideal for bookshelf or remote speaker applications, the compact S-9 provides amazingly life-like sound at an extremely modest cost. Separate woofer, tweeter, and Scott crossover network are included in the handsome air-suspension enclosure. **S-10.** Scott's all-new S-10 air-suspension speaker systems achieve extended range by means of larger low-frequency speakers and adjustable combined high frequency-midrange speakers. Grille cloth may be changed to match

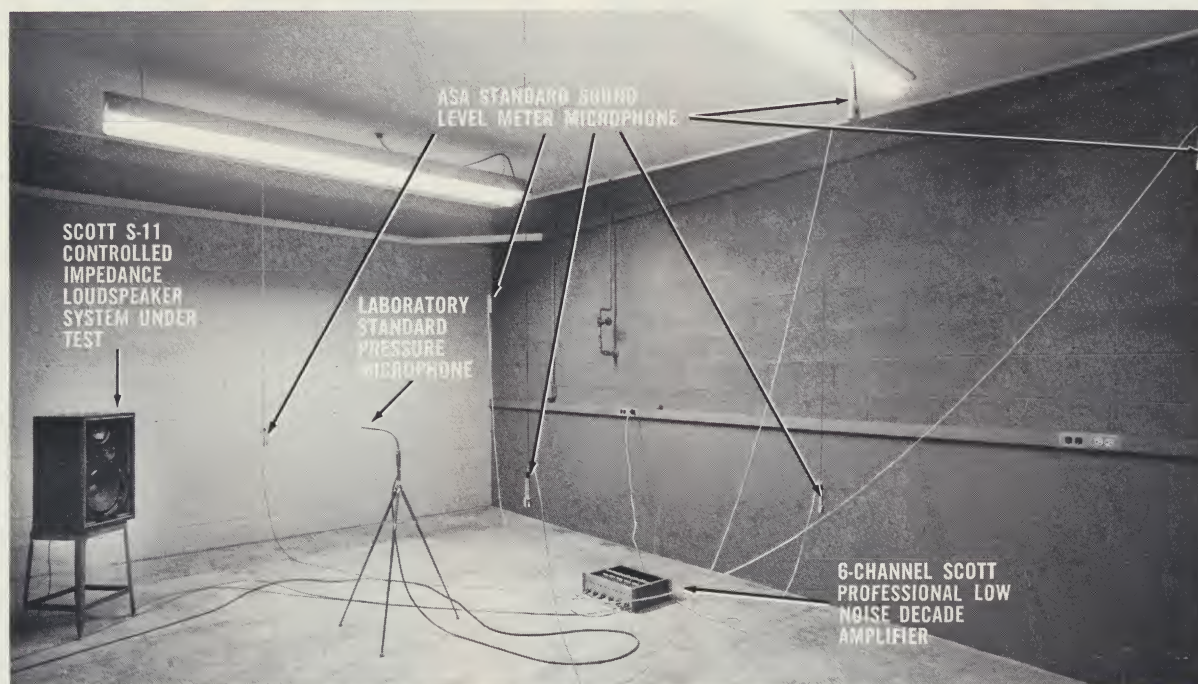
room decor. **S-11.** An all-time value in the quality speaker field, Scott's new S-11 is a full three-way system with unique Scott crossover network and hand-rubbed oiled walnut air-suspension enclosure. **S-12.** The Model S-12 is possibly the finest speaker system available. Its effortless full response is unsurpassed. Three-way design utilizes massive woofer, dual midrange, and matchless high frequency speaker. Removable grille frame allows use of decorator fabrics for grille cloth.

**CONTROLLED IMPEDANCE:** a Scott exclusive Scott engineers have developed a new kind of speaker system, specially designed for finest performance from solid-state components. Unlike vacuum tube components, solid-state components give best performance over a narrow range of load impedance. Ordinary speakers, operating over a wide impedance range, may either limit available power or overload amplifier output circuits. In Scott's new speakers, however, impedance range is carefully controlled by integrated engineering development of both speakers and crossover to match the capabilities of your solid-state equipment. That is why, of all the speakers on the market, only Scott Controlled Impedance speakers give you the kind of performance you want.



# SCOTT CONTROLLED IMPEDANCE SPEAKERS

Made for solid-state components, by the masters of solid-state technology



## The Scott Speaker Test and Design Room . . . Unique in the High Fidelity Field

Here is the specially-designed room where Scott Controlled Impedance Speakers were born. To eliminate sound transmission, the concrete block walls are filled with sand, and double acoustic doors are used. The walls and ceiling are irregularly shaped, and no two surfaces are parallel. The unique construction of this room allows Scott engineers to simulate virtually every possible listening en-

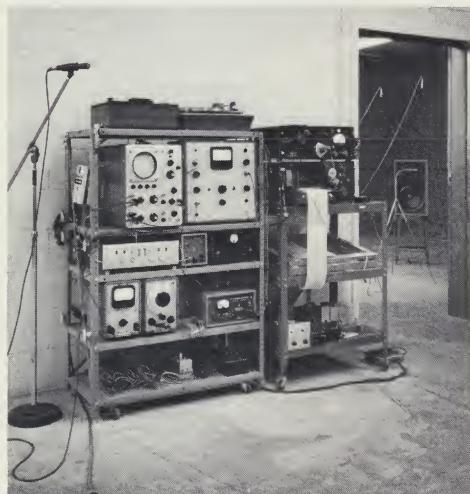
vironment, in order to give you speakers best suited for your particular listening requirements.

## EXPERT TESTIMONY ON SCOTT ACHIEVEMENT IN SPEAKER DESIGN

" . . . we were strongly impressed by the clarity of reproduction . . . These Scotts are as clear a musical sound as we would want . . . Frequency sweeps were unusually smooth over the entire range . . . It is flat from midrange  $\pm 5$  dB to 48 Hz

with usable response extending easily to 36 Hz. At the upper end our  $\pm 5$  dB tolerance gave us response beyond 20 kHz where our microphone calibration ends . . . Transient response is quite sharp with little hangover . . . a stereo pair will do justice to the finest sound source. We would like to think that we are quite fussy about the kind of sound we want. Certainly these Scotts fulfill our demands without need of qualifications."

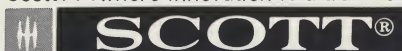
Larry Zide, AUDIO, March 1967



Scott engineers place enormous emphasis on accurate testing. All electronic measuring devices are located outside the speaker test room to avoid any change in acoustics.

SCOTT CONTROLLED IMPEDANCE SPEAKER SPECIFICATIONS				
	S-9	S-10	S-11	S-12
Components	6" woofer, 3" tweeter	10" woofer, 3 1/2" midrange tweeter.	12" woofer, 4 1/4" midrange, 3" tweeter.	15" woofer, 5 1/4" midrange, 3" tweeter.
Frequency range	50-18,000 Hz	35-18,000 Hz	35-20,000 Hz	30-20,000 Hz
Impedance (Ohms)	8	8	8	8
Power handling capacity (continuous)	25 Watts	50 Watts	55 Watts	60 Watts
Amplifier power requirements	Min. 7 Watts	Min. 7 Watts	Min. 10 Watts	Min. 10 Watts
Enclosure	Air suspension	Air suspension	Air suspension	Air suspension
Controls	Tweeter level	Midrange/Tweeter level	Tweeter-Midrange 3 position switch	Tweeter-Midrange 3 position switch
Cabinet style	Hand-rubbed oiled walnut, contemporary	Hand-rubbed oiled walnut, contemporary	Hand-rubbed oiled walnut, contemporary	Hand-rubbed oiled walnut, classic
Connectors	Terminal & phono jack	Terminal & phono jack	Terminal	Terminal
Dimensions	14"x8 3/4"x5"	23 1/2"x11 3/4"x9"	24"x14"x11 1/4"	27"x21"x16"

Scott. . . where innovation is a tradition



H. H. Scott, Inc., 111 Powdermill Road, Maynard, Mass. Export: Scott International, Maynard, Mass.  
The manufacturer reserves the right to incorporate improvements without prior notice. © copyright 1967. . . H. H. Scott, Inc.

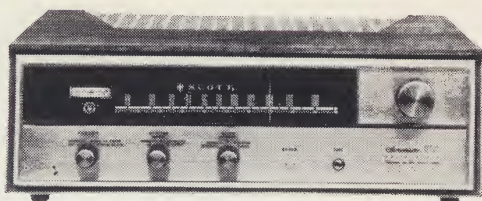


# HIGH FIDELITY EQUIPMENT REPORTS

*The consumer's guide to new and important high fidelity equipment*

## H. H. SCOTT 312C FM STEREO TUNER

**THE EQUIPMENT:** Scott 312C, a mono/stereo FM tuner. Dimensions: front panel, 15 by 4 $\frac{3}{8}$  inches; chassis depth, 11 inches. Price: \$294.95. Manufacturer: H. H. Scott, Inc., 111 Powdermill Rd., Maynard, Mass. 01754.



**COMMENT:** It is obvious that we didn't know how good tuners could be until the advent of solid-state. Here, thanks to transistorization, we have a tuner that is more compact than high-quality tuners once were, but which is easily one of the best ever made. And apparently the use of field-effect transistors (FETs) in the front end also can be credited with achieving an unprecedented high sensitivity, one which surprised even us and which, incidentally, does make a difference in the number of stations received and the clarity with which they come in. This is certainly a tuner for use in the most difficult of reception areas; stations seem to pop in all across the tuning dial.

The tuner also has a clean, open sound that strikes us as being limited only by the quality of the broadcasts themselves. Some other worthwhile features include: an adjustable muting circuit that can be set to suppress interstation noise without killing the weaker stations; a circuit safeguard against overloading from stronger stations; a high immunity to pulse noises (as from ignition and other nearby electrical sources); and what Scott calls a comparatron circuit, which prevents the automatic stereo section and its indicator from coming on when noise, rather than a true stereo signal, is being received. These circuits really work; the set not only responds to more stations than most tuners, but it pulls in fringe stereo without the sonic "whiskers" on loud passages that other sets have, and with generally more signal and less rushing noise on the second channel.

The front panel is styled in the black and gold of recent Scott units. Controls include a four-position function knob (off, normal, sub-channel filter, noise

## H. H. Scott 312C Tuner

### Lab Test Data

Performance characteristic	Measurement
IHF sensitivity	1.35 $\mu$ V at 98 MHz, 2.3 $\mu$ V at 90 MHz, 2 $\mu$ V at 106 MHz
Frequency response, mono	+1.5, -2.5 dB, 37 Hz to 16 kHz
THD, mono	0.36% at 400 Hz, 0.4% at 40 Hz, 0.46% at 1 kHz
IM distortion	0.6%
Capture ratio	4.5 dB
S/N ratio	58 dB
Frequency response, stereo, l ch r ch	+0.5, -3.5, 29 Hz to 16 kHz +0.5, -3.5 dB, 34 Hz to 16 kHz
THD, stereo, l ch r ch	0.7% at 400 Hz, 1.1% at 40 Hz, 0.9% at 1 kHz 0.58% at 400 Hz, 0.76% at 40 Hz, 0.78% at 1 kHz
Channel separation, left channel right channel	32.5 dB at mid-frequencies, 12 dB at 15 kHz 35 dB at mid-frequencies, 15 dB at 15 kHz
19-kHz pilot suppression 38-kHz subcarrier suppression	42 dB better than 80 dB

Scott spec  
1.7  $\mu$ V

filter); a four-position selector (regular mono, mono with muting, automatic stereo with muting, automatic stereo); a three-position switch that lets you use the tuning meter to indicate signal strength, multipath distortion, and center-of-channel tuning; and of course the station tuning knob. There also is a stereo signal indicator and a front panel tape-feed jack, which also can drive high-impedance headphones. The multipath position of the meter switch may be used to help reorient the antenna for specific stations; instructions are spelled out in the owner's manual—itself well illustrated, clearly written, and handsomely printed.

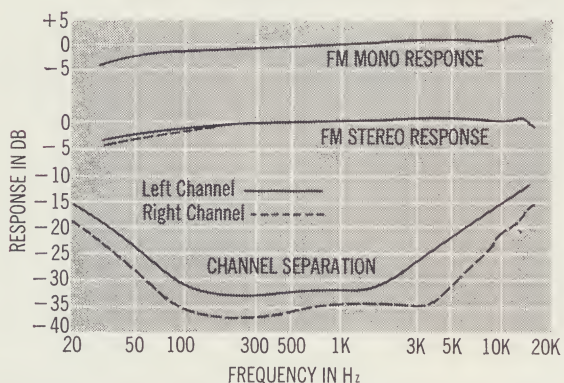
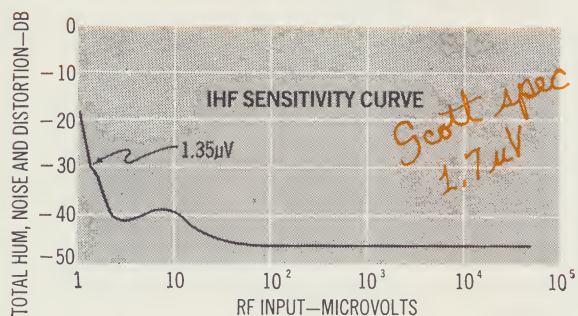
"...easily one of the best ever made."

"...unprecedented high sensitivity..."

The 348 and 388 receivers use the very same Tuner



The rear of the 312C contains the usual accouterments found on a tuner, plus a little more. There are two sets of stereo outputs (for driving two different stereo systems, or for feeding a stereo amplifier and a tape recorder at the same time). These outputs are controlled by a twin set of screwdriver adjustments which may be used, when installing the tuner, to match its output to that of other program sources in the system for a given setting of the master volume control. Another set of output jacks supplies a multipath output for monitoring on an oscilloscope; this feature together with the scope patterns shown in the manual, would be of primary interest to professional users. The set has an internal antenna that should suffice for strong, local signals; otherwise it will accept 300-ohm twin-lead from an indoor dipole or an external antenna. The antenna terminals also can be used with 72-ohm coaxial cable without the need for a matching transformer at the set input.



The 312C may be custom-installed, or may be used in an optional accessory case. The feel of the tuner is one of luxury, with smooth-acting controls and a generously proportioned tuning dial that includes a 0 to 100 logging scale. But best of all is the performance of this tuner. The test measurements (CBS Lab data are given in the accompanying charts) tell only part of the story. Use it, and listen to it through the high-quality playback system that it merits, and you'll soon discover that this is a tuner for the connoisseur, one which should gladden the heart of the FM enthusiast. Incidentally, the same tuner is available as a kit, Model LT-112B, for \$189.95. The kit version, thanks to the Scott-Kit packaging, prealignment of critical circuits, and exceptionally clear instructions, can be put together in about eight hours' time. Post-assembly alignment is done with the help of the set's own signal-strength meter and requires merely adjusting a few "cans." Side by side, we doubt that you could tell the difference between the factory-wired job and the kit version: they look alike, sound alike, work equally superbly. Each pulled in more stations more clearly, in mono and stereo, than we thought could be logged in our fringe area.

"...this is a tuner for the connoisseur..."

"Each pulled in more stations more clearly...than we thought could be logged in our fringe area."

Same fine tuner as the Scott LT-112B kit



FIRST CLASS  
PERMIT No. 12  
PINE BROOK, N. J.

**BUSINESS REPLY CARD**

No Postage Stamp Necessary if Mailed in The United States

Postage Will Be Paid By:

**KAY ELECTRIC COMPANY**

MAPLE AVENUE  
PINE BROOK, NEW JERSEY 07058  
ATTENTION: IRV SILBERG, MKTG. MGR.

**BUSINESS REPLY CARD**

No Postage Stamp Necessary if Mailed in The United States

Postage Will Be Paid By:

**KAY ELECTRIC COMPANY**

MAPLE AVENUE  
PINE BROOK, NEW JERSEY 07058  
ATTENTION: IRV SILBERG, MKTG. MGR.

FIRST CLASS  
PERMIT No. 12  
PINE BROOK, N. J.



Remarks \_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

Department \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City and State \_\_\_\_\_

Zip \_\_\_\_\_

Remarks \_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

Department \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City and State \_\_\_\_\_

Zip \_\_\_\_\_



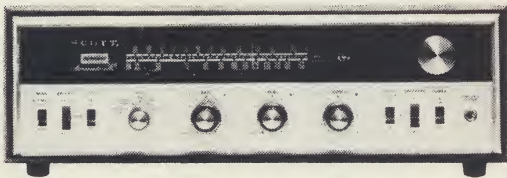
# EQUIPMENT REPORTS

*The consumer's guide to new and important high fidelity equipment*

## H. H. SCOTT 382 STEREO RECEIVER

**THE EQUIPMENT:** Scott 382, an AM and FM/stereo tuner and stereo control amplifier on one chassis. Dimensions: front panel, 15 by 4 $\frac{3}{8}$  inches; depth, 15 inches over-all. Price: \$359.95. Manufacturer: H. H. Scott, Inc., 111 Powder Mill Road, Maynard, Mass. 01754.

**COMMENT:** This new receiver from H. H. Scott looks on the surface like a recent predecessor, the Model 344 (see HIGH FIDELITY, October 1965). Although both sets are the same size, the new one costs considerably less than, and offers performance almost on a par with, the 344. That is to say, FM reception seems as good over-all, and amplifier power is just a shade lower, though quite clean and ample for most speaker systems. And the lower-priced 382 includes a respectable AM section for those interested in it.



The set is styled in the black and gold tones of recent Scott units and the chassis is encased in metal. The 382 may, with its four small feet, be placed on a shelf as is, or dressed up with an optional accessory walnut case. Alternately, the 382 may be flush-mounted for a built-in look. The upper half of the escutcheon is devoted to the station dial (AM and FM channel markings plus a signal strength meter and a stereo indicator) and the tuning knob. The lower half contains all the other controls. At the left is a group of three slide switches for mono/stereo mode; channel balance; tape monitor. At the right is another group of three: noise filter; speakers off/main/remote; power off/on. To the right of this group is a low-impedance stereo headphone jack which may be used regardless of what position the speaker selector switch is in.

Between these two groups of switches are the knobs for program selection (phono low, phono high, FM, AM and extra), bass, treble, and loudness. The bass and treble controls are dual-concentric, friction-coupled types that permit tone adjustment on each channel simultaneously or independently, as desired. Standard pin-jack inputs on the rear permit connecting signals from tape deck, phono cartridge, and any additional high-level source. Another pair of jacks is for feeding signals to a tape recorder. A pair of barrier terminal

strips is used for hooking up two sets of stereo speakers although only one pair (nominally "main" or "remote") can be switched to run at the same time.

The 382 is furnished with a swing-out loop-stick AM antenna that plugs into a special receptacle at the rear and which should do for all local AM reception. Alternately, there is a terminal for connecting a long-wire antenna and, of course, the terminals for FM twin-lead. The set has three fuses—one each for the output channels and one for the B-plus supply. A switched AC outlet is provided, and a system grounding screw.

The 382 uses FETs (field-effect transistors) in its FM front end—and apparently they do contribute another jot to the already high level of performance we have come to expect from Scott equipment. The set—in tests at CBS Labs—actually exceeded the manufacturer's specifications for IHF sensitivity, capture ratio, and signal-to-noise; it stands in a word as one of the "hottest" little FM tuners around. Response, in both mono and stereo modes, was uniform and smooth across the audio band, and there was more than enough channel separation for stereo. We especially liked the way the stereo indicator comes on only for a real signal, and is not triggered by noise along the FM band. The set should do exceedingly well on FM in just about any locale.

Apparently Scott engineers have not thrown anything away either in the design of the 382's amplifier section. For rated distortion of 0.8%, the set again went better than specified. Power bandwidth, for instance, was clocked from 13 Hz to 30 kHz, remarkable for a low-priced combination set. IM was satisfactorily low at the normal output levels that would most often be expected from this set, with best performance—logically enough—available into an 8-ohm load. Tone control action, while relatively moderate, was judged in listening tests to be effective enough. The loudness control has a built-in contour that begins lifting the bass end fairly soon after rotating it; it is up by about 7.5 dB at 9 o'clock. This cannot be switched out but it was not found to be disagreeable, even when listening through high-quality wide-range speakers. Low-frequency square-wave response showed the typical tilt found in most combination sets; the 10-kHz square-wave shows fast rise-time and no ringing—both resemble closely the square-waves obtained from the 344. The 382's damping factor, interestingly, was slightly better than that of the 344—28.6 as compared to 20.

Some of the features, flourishes, and fancy detailing that characterize more expensive units are missing from the 382 (for instance, no rumble filter; no interstation muting; a slide-switch rather than a knob for getting channel balance). Okay—if some limits must

*FET's are also used in the automatic variable bandwidth AM*

*as hot an FM tuner as the 315, 342, and 344B!*

*once again better than specified!*

"...one of the best receivers...we've yet auditioned."

"...one of the "hottest" little FM tuners around."

"...actually exceeded the manufacturer's specifications..."



be set to keep cost down, better let it be gadgetry rather than performance, that is compromised. The 382 does achieve its avowed design goal hands down, and shapes up as one of the best receivers in its price class we've yet auditioned.

CIRCLE 140 ON READER-SERVICE CARD

## Lab Test Data

### Performance characteristic

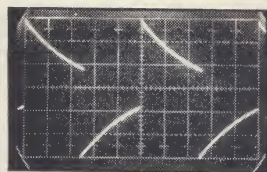
### Measurement

#### Tuner Section

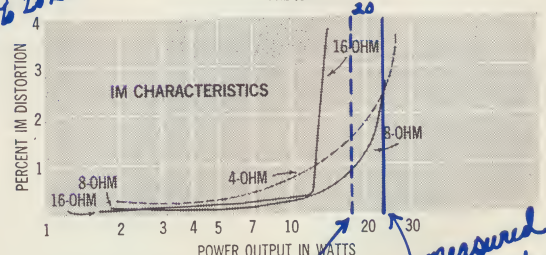
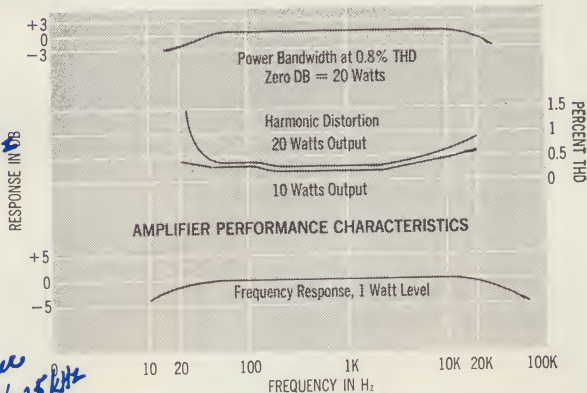
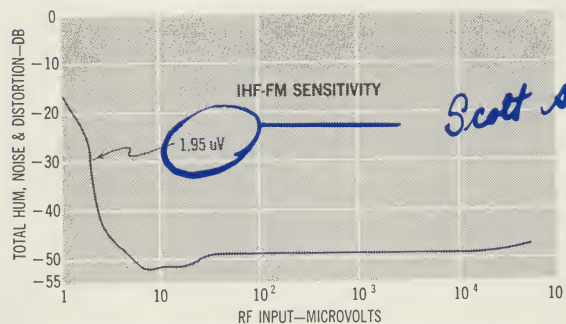
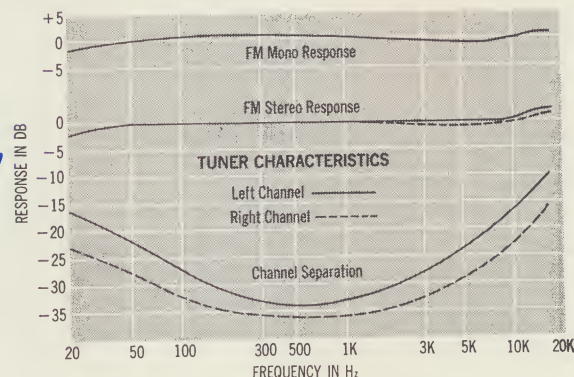
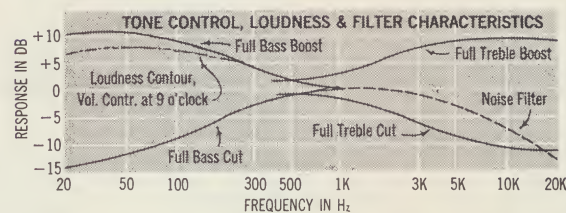
IHF sensitivity	1.95 $\mu$ V at 98 MHz, 1.85 $\mu$ V at 90 MHz, 2.1 $\mu$ V at 106 MHz
Frequency response, mono	+1, -2 dB, 20 Hz to 16 kHz
THD, mono	0.9% at 400 Hz, 1.3% at 40 Hz, 0.7% at 1 kHz
IM distortion	0.27%
Capture ratio	2.6 dB
S/N ratio	64 dB
Frequency response, stereo, l ch	$\pm$ 2 dB, 20 Hz to 16 kHz
r ch	+1, -2 dB, 20 Hz to 16 kHz
THD, stereo, l ch	1.2% at 400 Hz, 1.2% at 40 Hz, 0.9% at 1 kHz
r ch	1% at 400 Hz, 1.1% at 40 Hz, 0.9% at 1 kHz
Channel separation, either channel	better than 30 dB at mid-frequencies, better than 15 dB at 10 kHz
19-kHz pilot suppression	-39 dB
38-kHz subcarrier suppression	-47 dB

#### Amplifier Section

Power output (at 1 kHz into 8-ohm load)	
l ch at clipping	20.7 watts at 0.45% THD
l ch for 0.8% THD	21.6 watts
r ch at clipping	21.1 watts at 0.35% THD
r ch for 0.8% THD	23.8 watts
both chs simultaneously	
l ch at clipping	17.8 watts at 0.69% THD
r ch at clipping	18.5 watts at 0.56% THD
Power bandwidth for constant 0.8% THD	13 Hz to 30 kHz
Harmonic distortion	
20 watts output	below 0.85%, 28 Hz to 20 kHz
10 watts output	below 0.55%, 20 Hz to 20 kHz
IM distortion	
4-ohm load	below 1% to 12.5 watts
8-ohm load	below 0.5% to 13.5 watts
16-ohm load	below 0.5% to 12 watts
Frequency response, 1-watt level	+0, -3 dB, 12.5 Hz to 42 kHz
RIAA equalization	+0, -2 dB, 20 Hz to 20 kHz
Damping factor	28.6
Input characteristics	
low phono	Sensitivity 3.9 mV S/N ratio 49 dB
high phono	8.9 mV 54 dB
extra	280 mV 78 dB



Square-wave response to 50 Hz, left, and to 10 kHz.



Scott spec 2.2 uV!  
Scott spec 18 watts continuous wave  
Scott spec 25 Hz to 20 kHz  
Scott spec 0.8%!  
Scott spec 15 Hz to 25 kHz  
measured output!





**SCOTT  
PRESENTS  
A NEW WORLD  
OF STEREO  
ENJOYMENT  
FOR EVERYONE...**



**A concise guide  
to help you choose  
the best in stereo**

Scott . . . where innovation is a tradition

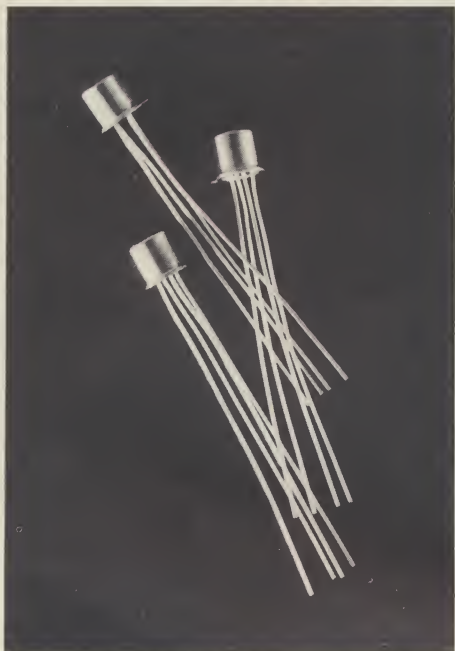


H. H. Scott, Inc., 111 Powdermill Rd., Maynard, Mass. 01754  
Export: Scott International, Maynard, Massachusetts



# WHAT TO LOOK FOR IN BUY

✻ The sweeping success of solid-state circuitry in the high fidelity industry has created problems both for the newcomer and the audio expert. ✻ Former standards for selecting superior equipment have, for the most part,



**Field Effect transistors . . . to hear more stations more clearly.** Many transistor tuners and receivers on the market today are subject to cross modulation . . . powerful stations appear at several points on the dial, obliterating other signals listeners want to receive. Lack of cross modulation resistance is an inherent failing of ordinary transistors. One solution to this problem is to use vacuum tubes or nuvistors in the front end of an otherwise all-transistor tuner. This hybrid design eventually defeats its own purpose, since the tubes generate drift-producing heat, and also wear out much more quickly than transistors. Scott has solved the dilemma with new Field Effect Transistors (FET's), a radically new solid-state device, completely different in operation and results from the ordinary transistor.

Scott was the first and only manufacturer to take advantage of the tremendous potential of these devices, hitherto used only in highly esoteric military and aerospace applications. Basically, the use of FET's permits design of nearly perfect FM and AM tuner front ends . . . free from cross modulation, free from drift, with better sensitivity, better selectivity, and lower inherent noise.

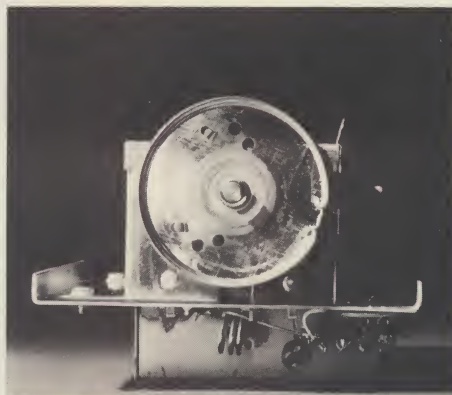
So important is this development to the entire electronics industry that Texas Instruments arranged to have Scott engi-

neers conduct a nationwide series of seminars, familiarizing the industry with the new solid-state techniques that FET's have made possible.

Because of the universal applicability of this dramatic improvement, it is probable that FET circuitry\* will not forever remain a Scott exclusive . . . indeed, many Scott innovations are now accepted industry-wide practices. In this way, the introduction of Field Effect Transistor circuitry continues Scott's policy of contribution, through innovation, to the consumer and to the industry as a whole.

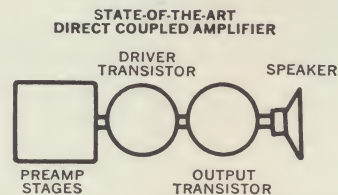
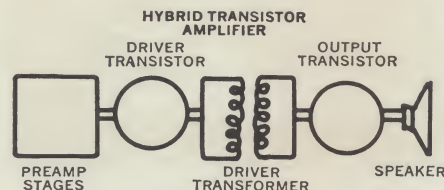
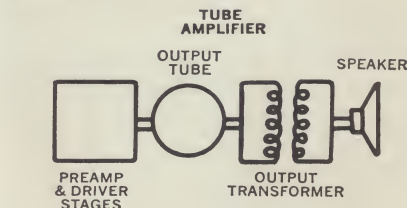
Similarly, Scott FET AM tuner circuitry incorporates Automatic Variable Bandwidth, a unique feature which automatically adjusts tuner bandwidth for the quality of the incoming signal. In addition, the new Scott Signal Sentinel (Automatic Gain Control) increases tuner sensitivity when incoming signal strength decreases, and increases resistance to cross modulation when signals get stronger.

This resistance to overload is the reason that no local-distant switch is found on any Scott tuner or receiver. The remarkable Scott tuner designs can handle strong local stations as well as weak distant ones. Only inferior tuners and receivers require the use of a local-distant switch to compensate for inherent deficiencies.



**Silver-plated front end for maximum sensitivity.** Silver is the best conductor known . . . and, only by silver-plating the critical front end portion of the FM or AM tuner can you achieve maximum tuner sensitivity with virtually no cross modulation. In addition, silver is far more resistant to corrosion than copper, the second best conductor. The use of Field Effect Transistors in Scott front ends further high-

lights the importance of silver-plating, since FET's are so long-lived that only silver-plated parts can offer corresponding longevity.



**State-of-the-art direct coupled circuitry.** In the days of vacuum tube amplifiers, large and heavy output transformers were an indication of a better amplifier. In today's transistor amplifiers, however, audio transformers, which include both output and driver transformers, should *not* be present. One of the great potential advantages of transistor over tube circuits is freedom from the distortion inherent in audio transformers.

In a vacuum tube amplifier, transformers are a necessity in order to couple the high impedance of the vacuum tube to the low impedance of the loudspeaker. Such coupling is not needed in transistor component design, because transistors are inherently low impedance devices. It is unlikely that you will find any good modern transistor amplifier employing output or driver transformers.

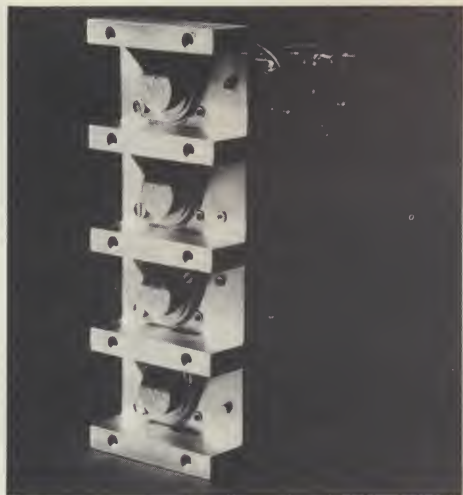
Some manufacturers, as you might expect, obscure the fact that they use output or driver transformers by hiding them. You may have to ask the salesman to take off a cover to make sure that there are no transformers in the unit other than the essential power transformer.

\* Patents pending



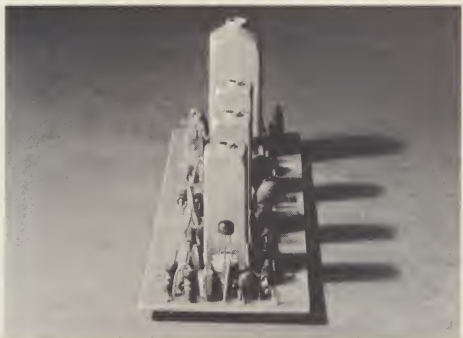
# ING STEREO COMPONENTS

fallen by the wayside. ❀❀ Many music lovers have written us, requesting new standards for recognizing the best in today's solid-state equipment. ❀ Here are some guides to help you make a wise choice in your purchase.



**Silicon output transistors for effortless instantaneous power.** Transistors are made of either silicon or germanium. There is no question about the greater effectiveness of silicon in an amplifier's output stage . . . silicon output transistors are more rugged, more reliable, and have superior high frequency performance capabilities. The differences are so marked that no serious music listener should consider an amplifier that does not use silicon in this critical application.

Closely allied to the use of silicon output transistors is the use of heavy heat sinks mounting the power output transistors, in amplifiers rated at 35 or more watts per channel. Only with lower-powered amplifiers is adequate transistor cooling afforded by the chassis itself. When heavy heat sinks are omitted in a powerful amplifier in order to reduce costs, long life and service-free operation are endangered.



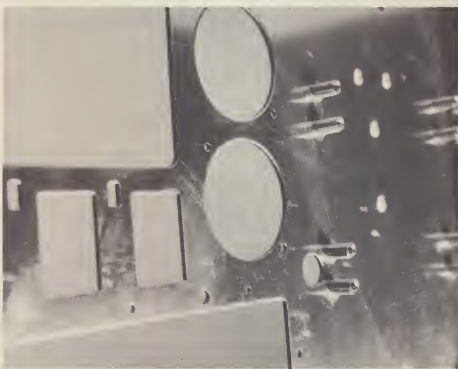
**Silicon transistor IF for highest selectivity.** The IF section determines the selectivity of the tuner and thereby permits you to

separate weak stations from strong stations located close together on the dial. Only silicon planar transistors can provide the high selectivity and the necessary wide bandwidth for maximum stereo separation with long-term stability.

Another clue to superior tuner design is the use of separate IF amplifiers and limiters. When IF amplification and limiting are accomplished by circuitry designed for these separate respective functions, distortion is greatly reduced and stereo separation is enhanced. Avoid those tuner designs which accomplish limiting by overloading their IF stages.

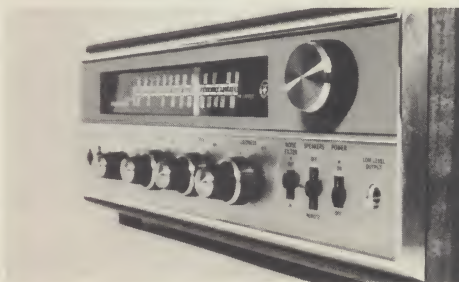


**Series-gate, time-switching multiplex circuitry for maximum separation.** The best stereo tuners incorporate the time-switching multiplex circuit originated and patented by H. H. Scott. This circuit insures the lowest distortion and best stereo separation. It also minimizes interference from the background music signals an FM stereo station is permitted to broadcast in addition to its stereo programs.



**Aluminum chassis for cool operation.** Non-magnetic electrolytic aluminum is used as a chassis material on all Scott components, rather than low-cost steel. Alumi-

num acts as a shield against induced hum, and is an ideal dissipator of heat, thus guaranteeing long life through cool operation. In addition, aluminum is non-corroding, making Scott components ideal for use in humid or tropical areas, or in marine applications.



**Adequate control features add to your enjoyment.** Superior sound is the only reason for high fidelity's existence. And the control features built into a stereo component are your only way of obtaining that character of sound which suits your listening tastes and individual room acoustics. Scott gives you all the controls you need to adjust the sound to your particular requirements . . . complete input facilities for all program sources; special filters to remove unwanted sounds such as record scratch or tape hiss; separate bass, treble, and volume controls; controls that make it possible for you to simulate stereophonic sound on your older monophonic recordings; balance control to correct for differences in volume between channels; special muting controls to eliminate noises between stations . . . all these and so many more are incorporated in Scott components to make your listening more enjoyable.

**The manufacturer's reputation is your strongest guarantee.** A last, but vital consideration is the manufacturer's record and reputation for innovation, quality, and service.

In investigating this, particularly evaluate the engineering reputation of the firm, its record of responsibility to the consumer, and contributions to the development of the industry . . . all part of true mastery in the stereo high fidelity component field.

*Scott . . . where innovation is a tradition*



H. H. Scott Inc., 111 Powdermill Road, Maynard, Mass.  
Export: Scott International, Maynard, Mass.



# GREAT SCOTT...

stereo compacts that turn you on!

## Scott...the stereo compact with component features

- Complete component controls let you adjust the music to your own tastes and to room acoustics.
- Crystal-clear AM, 3-dimensional FM stereo are yours with Scott's revolutionary compact tuner (models 2502, 2503).
- Microphone/Guitar mixer controls let you make your own music on one or both channels.
- Professional automatic turntable, with sensitive magnetic cartridge and diamond stylus.
- Complete provisions for plugging in

tape recorder or tape cartridge machine.

- Extra speaker provision for music in other rooms.

- Stereo headphone output for private listening with speakers turned off.

- Stereo-light indicator goes on only when tuner has automatically switched to stereo (models 2502, 2503).

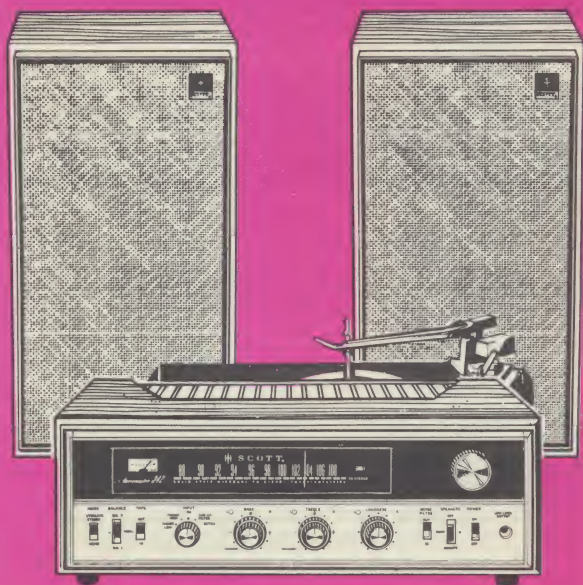
Model 2501 Stereo Compact,  
Phono Only

**\$249<sup>95</sup>**



Model 2502 Stereo Compact  
AM/FM Phono \$339.95 (illustrated);  
Model 2503 Deluxe Stereo Compact \$399.95

## Three great Scott compacts from which to choose:



## ENJOY FABULOUS FM STEREO... RECORDS, TOO, WITH THIS SCOTT STEREO COMPONENT SYSTEM!

Scott's new 65-watt 342 FM stereo receiver incorporates revolutionary Field Effect Transistors to bring you FM reception superior to any you've ever heard before. And we're including a professional automatic turntable, sensitive magnetic cartridge with polished diamond stylus, and two Scott S-9 Controlled Impedance speaker systems... now you can enjoy superb Scott performance in a complete system for your home... at an amazingly low price. Complete Scott Stereo Systems, depending on choice of accessory equipment, as low as \$369.95.

**\$369<sup>95</sup>**

(Above system with Model 382 AM/FM Stereo Receiver... \$40 additional)



**H. H. SCOTT, INC.**

111 POWDER MILL RD., MAYNARD, MASS., 01754

**COMPONENT PRICE LIST****AMPLIFIERS**

260	120w Solid State Stereo Amplifier	\$294.95
299-T	65w Solid State Stereo Amplifier	199.95

**TUNERS**

312-C	Solid State FM Broadcast Monitor	294.95
315	Solid State FM Stereo Tuner	199.95

**RECEIVERS**

388	120w AM/FM Solid State Stereo Tuner/Amplifier	529.95
348	120w FM Solid State Stereo Tuner/Amplifier	499.95
344-B	85w FM Solid State Stereo Tuner/Amplifier	399.95
382	65w AM/FM Solid State Stereo Tuner/Amplifier	359.95
342	65w FM Solid State Stereo Tuner/Amplifier	299.95

**KITS**

LK-60	120w Solid State Stereo Amplifier Kit	199.95
LK-72B	80w Stereo Amplifier Kit	139.95
LT-112B	Solid State FM Broadcast Monitor Kit	189.95
LT-110B	Stereo Tuner Kit	129.95

**STEREO COMPACTS**

2501	Stereo Compact, phono, S-9 speakers	299.95
2502	Stereo Compact, AM/FM stereo, phono, S-9 speakers	399.95
2503	Deluxe Stereo Compact, AM/FM stereo, phono, S-10 speakers	469.95
2599	Smokey grey hinged plastic cover for 2501, 2502, 2503	22.95
2310	FM Stereo Tuner for 2300 series Stereo Compact	124.95

**SPEAKERS**

S-9	Oil Walnut	39.95
S-10	Oil Walnut, extended range	69.95

**CASES**

For all Amplifiers, Tuners, Kits, 344-B, 342, 382		
C	Metal, Simulated Wood Grain Vinyl	13.95
CWM	Wood, Mahogany	24.50
CWW	Wood, Walnut	24.50
For 340-B, 345, 380		
G	Metal, Simulated Wood Grain Vinyl	17.95
GWM	Wood, Mahogany	29.95
GWW	Wood, Walnut	29.95
For 348 and 388		
KWW	Wood, Walnut	29.95

**ACCESSORIES**

CRK-1	Rack Mount Adaptors for all Kits and Wired Units except 348, 388	19.95
-------	--	-------

Note: Transportation costs to areas West of the Rockies necessitate the following price differentials: Amplifiers, add \$4; Tuners, add \$3; Tuner/Amplifiers and Loudspeakers, add \$5; Accessory Cases, add \$1.

**SUGGESTED AUDIOPHILE PRICES SUBJECT TO CHANGE  
WITHOUT NOTICE — Effective September 1, 1966**



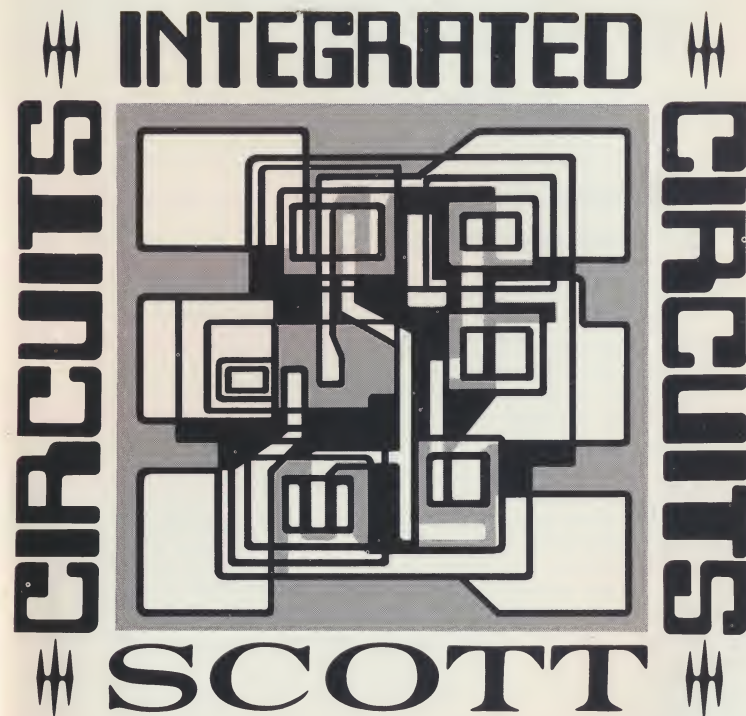


These three superb Scott receivers include Scott's newly developed Integrated Circuits. Left to right, Model 388, 348, 344B.

Scott . . . where innovation is a tradition



H. H. Scott, Inc., 111 Powdermill Road, Maynard, Mass.  
Export: Scott International, Maynard, Mass.





# First tubes, then transistors and FET's ... and now, the Scott Integrated Circuit, the most important technological advance in high fidelity history!

## Integrated Circuits... the computer-born miracle.

Integrated circuits, or "IC's", were originally developed for use in computers, where micro-miniaturization techniques had to be perfected in order to avoid filling whole rooms with circuitry. The integrated circuit is a complete circuit in miniature ... often barely larger than a grain of sand. The various elements of the circuit ... the transistors, resistors, and wiring ... are etched on to a microscopic wafer of silicon by a photographic process.

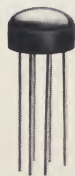


figure 1.—This tiny space age device (shown actual size) contains a Scott Integrated Circuit no bigger than the dot of an "i".

## The eternal circuit.

Scott Integrated Circuits are actually sculptured in silicon, an extremely stable and durable substance. Wires, transistors, resistors, and the like are created in this circuit by introducing other elements into the silicon wafer ... elements that vary the conductive characteristics of the pure silicon. Thus, there are no loose wires or parts, nothing that can change, nothing that can short out, fall out, or wear out. In fact, new Scott Integrated Circuits could last literally thousands of years.

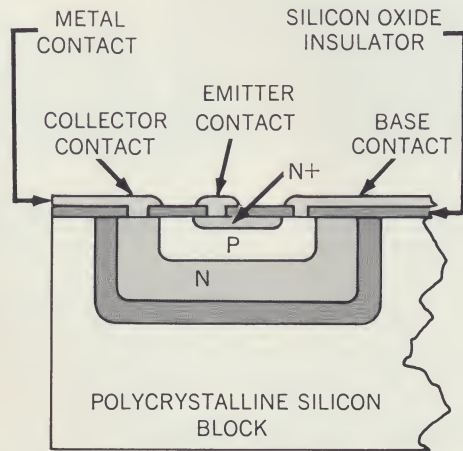
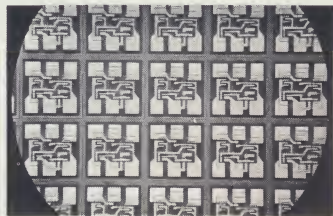


figure 2.—Here, shown extremely magnified, are the details of the Scott Integrated Circuit. All the elements of the circuit are permanently carved into the silicon wafer.



## Total reproduceability.

Because of the permanence of the material, and because each Scott Integrated Circuit is reproduced directly from a microscopically accurate photographic master, there is no possibility of variation, as can easily happen in ordinary wired circuits. Each IC is exactly like the next. Once an IC is produced, inspected, and tested, there is no possibility that it will have hidden flaws that will cause it to fail at a later date.



shown approx.  
25 times  
actual size

figure 3.—Scott Integrated Circuits on wafer, before being diced into individual units

## Scott harnesses the Integrated Circuit.

Scott engineers, realizing the vast potential of the integrated circuit, consulted with the scientists at Fairchild Semiconductor, the nation's leading experts on IC's. After months of testing and modification, an integrated circuit was developed which met Scott's stringent performance standards . . . and a new era in high fidelity was born!

## More circuitry in less space.

The Scott Integrated Circuit achieves new standards of compactness. Used in the vital FM tuner IF (for Intermediate Frequency) strip, Scott Integrated Circuits actually allow the use of more circuitry in less space.

Each Scott IC contains five transistors and two resistors. There are four Scott IC's used in each IF strip . . . making a total of twenty transistors. This is in marked contrast to the IF strip the new unit replaces, which contains five transistors.

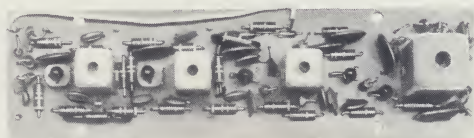


figure 4.—The new Scott Integrated Circuit IF strip on the bottom contains 20 transistors . . . 4 times as many as its predecessor on the top. Notice the simplification in parts layout that Scott Integrated Circuits have made possible.

## More performance in less space.

Scott's previous IF strip, without IC's, is rated as one of the finest in the component industry. It gives capture ratio and selectivity figures of 2.5 dB and 45 dB, respectively. Scott's new Integrated Circuit IF strip is conservatively rated by Scott at 1.8 dB capture ratio, and 46 dB selectivity. Test reports by Fairchild Semiconductor, however, show the new Scott Integrated Circuits to be consistently capable of an incredible 0.8 dB capture ratio!



## **What Scott Integrated Circuits mean to you.**

Plainly stated, Scott's new Integrated Circuits let you hear more stations with less noise and interference. Weak, distant stations that you never received before will suddenly appear with amazing clarity. Outside interference from such sources as electric razors, auto ignitions, etc., will be drastically reduced. And, you can count on enjoying this amazing performance for many, many years . . . thanks to the amazing reliability of the Scott Integrated Circuit.

## **The third generation : Scott's new Integrated Circuits . . . A study in depth**

In less than five years, a series of dramatic advances has swept the electronics industry . . . first tubes, then transistors and Field Effect Transistors . . . and now, we begin a third generation . . . the Integrated Circuit. This computer-born miracle, now incorporated into Scott components, sets hitherto undreamed-of standards for the high fidelity industry. Here are the facts you should know about this far-reaching Scott breakthrough in high fidelity technology:

The reliability and long-term stability of silicon transistors is a well-known fact and it therefore stands to reason that a complete circuit made of the same material will have these advantages, plus some of its own. The most important advantages are an extreme degree of miniaturization allowing much more circuitry per

square inch, and uniformity of performance due to complete control of the manufacturing process of all the circuit components.

H. H. Scott has been investigating possible uses of IC's for the past year and is now shipping high powered receivers with an IC FM IF amplifier. This IF amplifier uses four Fairchild Semiconductor  $\mu$ A703 IC's and has ten tuned circuits. It was developed, as were the IC's it contains, jointly by H. H. Scott and Fairchild engineers. The design objective was to duplicate or better the performance of the already-superior silicon transistor design, make full use of the advantages of IC's, and maintain the same price — a difficult task, but one that has been superbly accomplished.

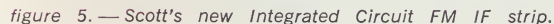
First it was necessary to have a circuit for the IC that would make a good, stable IF amplifier and would also provide broadband limiting without distortion. The circuit had to provide high gain per stage to keep the number of stages required within economic feasibility; and its loading effect on the tuned circuits of the IF amplifier could not impair selectivity. With these requirements in mind, Fairchild provided H. H. Scott with the  $\mu$ A703, a five-transistor IC with bias and decoupling resistors. The  $\mu$ A703 circuit is an emitter-coupled pair with a useful bandwidth of 150 mHz, a stability-limited gain of greater than 40 dB, an output impedance of greater than 50k ohms, and, as a limiter, does not saturate, thereby minimizing phase distortion.

A quality FM IF strip must have at least seven high Q-tuned circuits for good selectivity and approximately 90 dB of gain for good sensitivity and limiting. The first requirement means that the strip must contain four IF transformers and, using a  $\mu$ A703 between each transformer, there will be four IC's. The  $\mu$ A703 has a minimum gain of 26 dB at 10.7 mHz. With four of them



Measurements on the IF strip were made per IHFM-T-100, the standard specification of the High Fidelity industry, with a high performance FET front end. The performance advantages of the IC IF strip compared to a discrete component strip with the same front end are shown below.

	Discrete	IC
1) Sensitivity	1.7 $\mu V$	1.5 $\mu V$
2) Capture Ratio	3 dB	1.75 dB
3) Selectivity	45 dB	46 dB
4) AM Rejection	-46 dB	-52 dB
5) Distortion @ 400 Hz	.3%	.3%
6) Stereo Separation	35 dB @ 400 Hz	41 dB @ 400
	19 dB @ 15 kHz	30 dB @ 15 kHz





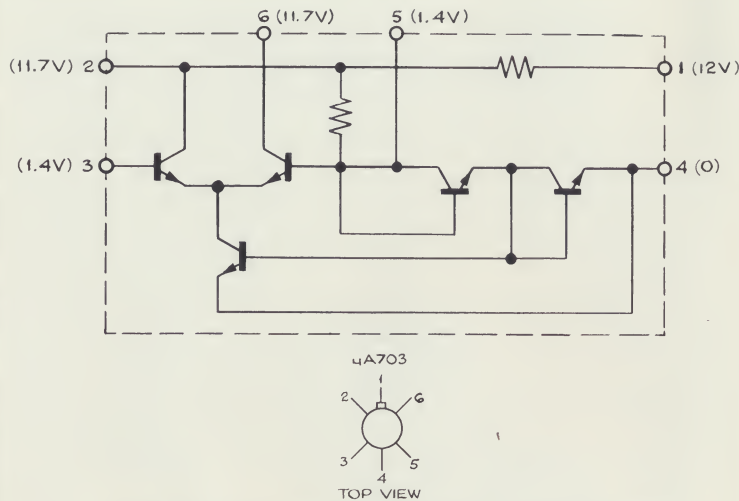


figure 5A.—Circuit diagram for each Scott IC. There are four in each IF amplifier.

Now, let's take each specification and explain why there is an improvement with the IC strip.

**1) Sensitivity:** The transistors used in the  $\mu A703$  are 900 mHz devices and therefore have a better noise figure than normal IF devices at 10.7 mHz.

**2) Capture Ratio:** Capture ratio is determined by limiter-detector bandwidth and the phase linearity of the IF strip. Since the  $\mu A703$  has a useful bandwidth of greater than 150 mHz and extremely low phase distortion, there is a substantial improvement in capture ratio without any sacrifice of selectivity. Fairchild engineers have

measured capture ratios as low as 0.8 dB on this strip.

**3) Selectivity:** Selectivity is purely a function of tuned circuit quantity and loaded Q's. Both strips have the same number of tuned circuits with approximately the same Q's, so no substantial improvement is noted here.

**4) AM Rejection:** The improved AM rejection, once again, is due to the limiter performance of the  $\mu A703$ .

**5) Distortion:** Distortion was measured at 400 Hz and since phase linearity does not affect the lower frequencies to any great extent, no change is noted here.

**6) Stereo Separation:** Stereo separation is greatly affected by the performance of the IF amplifier, particularly at high modulation frequencies, so here the 15 kHz improvement is an indication of the excellent phase linearity of the IC IF strip.

The key to a good electronic product is design engineering — future improvements in Scott equipment will result, as they always have, from the studied efforts of their engineering staff. But this newest element in the picture, integrated circuits from Fairchild Semiconductor, has already given Scott engineers a new degree of flexibility and freedom in circuit design. These integrated circuits, as shipped to H. H. Scott, are complete, pre-wired, pre-tested circuit elements fabricated according to Scott specifications. This enables the assembly job to be performed at a minimum of expense, making it possible to give you, the consumer, more circuitry and performance for your dollar.